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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,228	01/18/2002	Erich Frauendorfer	1085-019	9083

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EXAMINER

SERGEANT, RABON A

ART UNIT PAPER NUMBER

1711

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/052,228	Applicant(s) FRAUENDORFER ET AL.	
	Examiner Rabon Sergeant	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-16, 18-23 and 25-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-16, 18-23 and 25-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/5/03</u> . | 6) <input type="checkbox"/> Other: _____ |

A

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1. The amendment filed May 27, 2005 has been entered. The finality of the Office action of February 24, 2005 has been withdrawn, in view of the necessity of rejecting the claims over EP 532,939.

2. Claims 14-16, 18-23, and 25-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Firstly, within the last line of claim 15, the "or" should be "and". Since a group of species has been specified, the species, themselves, should not be referred to in the alternative.

Secondly, within claims 14 and 28, applicants have used the language, "wherein at least one of said catalysts is an amine oxide and/or comprises at least one amine-N-oxide group". Applicants have further specified clauses within these claims that define said amine oxide and refer to said (the) amine-N-oxide group". It is unclear if these definitions of "said amine oxide" and references to "said (the) amine-N-oxide group", pertain to all of the compounds encompassed by applicants' language, "wherein at least one of said catalysts is an amine oxide and/or comprises at least one amine-N-oxide group". For example, it is unclear from the claim if a "catalyst comprising at least one amine-N-oxide group" is governed by the no more than 8 carbon atom residue requirement and the β -hydrogen requirement, since these requirements only specifically refer to "said amine oxide".

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 14-16, 18-22, 26-28, 30-32, 34, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 532939.

The reference discloses the production of polyurethane foams by reacting a polyisocyanate with a polyether polyol in the presence of an amine oxide compound having a β -hydrogen relative to the nitrogen atom of the amine-N-oxide group. The reference further discloses that tin catalysts and foam stabilizers may be employed within the composition and that processing temperatures of at least 60°C are employed. See pages 2, 5, 6, and 7 of the translation. Since β -hydrogen amine oxides and temperatures that meet applicants' claimed temperature are utilized, the position is taken that Cope elimination occurs during reaction of the disclosed reactants.

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5. In view of the position taken within paragraph 2, the position is further taken that the limitation requiring “said amine oxide” to have “no more than 8 carbon atom” residues does not apply to applicants’ alternative “catalysts comprising an amine-N-oxide group”. Furthermore, the position is taken that claims 15, 16, 18, and 30 merely define the “said amine oxide” without mandating the use or selection of “said amine oxide”.

6. Claims 23, 25, 29, 33, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 532939 in view of Duffy et al. (‘602).


As aforementioned, the reference discloses the production of polyurethane foams by reacting a polyisocyanate with a polyether polyol in the presence of an amine oxide compound having a β -hydrogen relative to the nitrogen atom of the amine-N-oxide group. However, the reference fails to disclose the use of temperatures that exceed 130°C (claims 25 and 29) and the specific use of dibutyl tin mercaptide catalysts (claims 33 and 36). With respect to applicants’ claimed temperature, the position is taken that the reference’s 120°C temperature (page 7 of the translation) is close enough to the claimed temperature that one of ordinary skill in the art would have expected the same reaction and product to occur. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). Furthermore, it would have been obvious to modify such a result effective variable (reaction temperature) as needed to obtain a viable foam product. With respect to the selection of the dibutyl tin mercaptide catalyst, the position is taken that this catalyst was known to be a suitable catalyst for the production of polyurethane foams at the time of invention. Furthermore, dibutyl tin mercaptide was known to have equivalent catalytic properties to such catalysts as dibutyl tin laurate (dibutyl tin laurate is disclosed at page 6 of the translation as being a suitable catalyst). These position are supported

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by the teachings of Duffy et al. at column 4, lines 15-20. Therefore, it would have been obvious to select dibutyl tin mercaptide catalyst for use in the disclosed reaction. Lastly, with respect to claim 23, though the reference discloses the use of catalytic compounds other than amine oxides, the position is taken that it would have been well within the purview of the skilled artisan to determine whether these catalysts were necessary to yield the desired foam product. Therefore, it would have been obvious to utilize them or not as the situation dictated.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent
June 15, 2005


RABON SERGENT
PRIMARY EXAMINER